International Journal of Educational
Science and Research (IJESR)
ISSN (P): 2249-6947; ISSN (E): 2249-8052
Vol. 12, Issue 1, Jun 2022, 231–236

TRANS STELLAR
•Journal Publications •Research Consultancy

COVID-19 PANDEMIC: CHALLENGES IN ADMINISTERING CLINICAL TRIALS

DR. PANKAJ A MANDALE

Texila American University, Department of Clinical Research, Ebene 72201, Mauritius

ABSTRACT

Extraordinary challenges are faced globally due to COVID 19 pandemic, as nations tell the tale and overcome economic challenges. The lockdown imposed in several international locations has also affected the overall medical trials due to travel restrictions, online personnel unavailability, investigational product unavailability, and scientific oversight. Multiple complex challenges involving various ambiguities and factors, including prioritising COVID-19 affected patient protection and treatment during the virulent disease, enrolling members into studies, maintaining patient adherence, providing up-to-date health information through diagnostics and administrating interventions and treatment therapies to patients who have already been registered, have highlighted the challenges and raised various scientific and moral issues associated with scientific research. The modern scenario has caused well-timed trouble fixing to warrant and safeguard patient safety in scientific studies and is observed and maintained.[1]

The fundamental reason is to spotlight critical problems in administering scientific trials during the pandemic and provide structured tips for promoters, examiners, and members participating or part of the trial to figure out plausible dangers and challenges to efficiently generate high-quality scientific evidence.[2]

KEYWORDS: COVID-19, Clinical Trials & Pandemic

Received: Apr 24, 2022; **Accepted**: May 14, 2022; **Published**: Jun 07, 2022; **Paper Id**: IJESRJUN202221

Original Article

INTRODUCTION

COVID-19 has brought about unprecedented challenges for people and communities worldwide. A COVID-19 pandemic was declared by World Health Organization (WHO) on March 11 2020.[3][4]. Globally, nations were proactive in implementing restraints on travel and gatherings. The main aim was to avoid contact and transfer of virulence from person to person. Thus remote jobs became the new norms.[2]Thus necessitating new methods and ways to conduct clinical studies efficiently and adjust according to worldwide healthcare policies.

As clinical studies are performed on stringent monetary resources, conducting, completing, and managing the trials is essential.[1]

Significant changes have been observed in controlling and conducting medical trials during the pandemic. Challenges like changes in regulatory regulations and restrictions on travel for community and healthcare workers, in case of contamination of study participants or even the healthcare workers, would affect the study outcomes. The top regulatory agencies from Europe, Ireland, UK and USA have identified and highlighted the concerns and issues faced during the pandemic and provided solutions for conducting clinical studies smoothly.[1,3]

The National Institute of Health Research (NIHR) from the UK is a significant contributor of monetary resources to fund clinical studies and has also provided guidelines to the medical fraternity and the educational and training resources to conduct research activities during the pandemic.[4]Various clinical research organisations re-considered the initiations of newer clinical studies. They involved new sites considering the increase in the spread of virulence, regulatory restrictions and lockdowns during the pandemic.[5]The regulatory agencies in Europe also

drafted regulations for conducting clinical studies during the space of virulence.[1]

MAIN CONTENT

Unprecedented challenges were faced during the pandemic by the community, healthcare workers, the clinical study organisers and the healthcare facilities in conducting and initiating a new study side. The biggest challenge was to create a new study site as countries underwent lockdowns to curtail the pandemic. Moreover, the challenge is to adhere to the study protocol, perform routine study audits, conduct studies as per the SOPs, and regularly interact with and report study development safety and efficacy outcomes to the regulatory bodies. From the patient perspective, their inability to visit the healthcare facilities as per the protocol lays additional challenges and burdens on the clinical operations.[2,6]

A few of the significant challenges faced during the COVID-19 are mentioned below:

Challenges of Initiating the Clinical Trial and Patient Recruitment

The unique challenges during the pandemic caused great distress and stress to the health facilities initiating the study and the patients who were part of the study or eager to participate. Challenges to finding the right human resource for conducting the survey, study coordinators, various diagnostic tools and personnel, and different healthcare setup issues affected the overall functioning of the clinical research. Moreover, synchronising the old study sites and initiating new study sites with patient recruitments was a significant concern since most countries had restricted movement of community personnel. Due to such scenarios, the training of healthcare professionals regarding the protocol, Sops, source documentation, and reporting of adverse effects due to drugs contributed to the overall burden on the clinical operations and administrations.[2, 6]

Resource Allocation For Trials

Various human and financial resources are required to conduct the smooth running of the trial. The pandemic highlighted the lack of preparedness and risk management planning, especially when considering resource management like humans, finance, equipment and a complete healthcare system to provide the most effective treatment.[&&&][7]

Clinical studies are carried out under fixed financial resources. It creates an immense challenge to conduct the studies, especially when international sites are involved, especially during a pandemic.[&&&}[8]The challenges increase in such multicentre large-scale scientific trials, making the study protocol more complicated, difficult to monitor sites in affixed budget and time set, and avoiding sites and healthcare. Professionals deviate from the protocol and comply with the regional regulatory guidelines and policies to conduct the study.{&&&][9]

Patient Enrolment and Consent in Trial

As the concern of COVID increased, it directly impacted patient recruitment, as direct interaction with the patients was prohibited, especially during consent taking and protocol query resolutions, since a proper participant's consent is mandatory as per the ICH-GCP (Good Clinical Practice).[1,10, 11].To overcome the challenges of patient consent taking, the digital consent solution was taken to streamline and fasten the process with the help of efficient software, which was easy and convenient to use for the participant and the healthcare worker. Digital consent helped to take fasten the process of participant approval. Also, it lowered the dependence on healthcare workers as most of the interactions were done remotely with the study participant.[1]

Interaction and Communication with Healthcare Workers and Staff

Regular verbal exchange with and understanding of the requirements at the trial site is an essential part of a clinical trial perspective.[12,13]Trail manager's basic function is to monitor the study sites and look for any trail-related deviations or concerns. These managers are a bridge between the healthcare professionals and the stakeholders and keep both sides informed about the progress and problems at the study site. Trail managers help communicate the study details to different places and maintain consistency in documenting and reporting risk concerns and preparing emergency plans to safeguard the wellbeing of the study participants.[1]

Logistic Challenges

COVID-19 prominently highlighted the challenges and shortcomings in implementing smooth logistics support to trial centres and patients. Due to pandemic concerns, over two-thirds of the trials were stopped or delayed by mid-2020.[14, 15] A nightmare for organisations like shipping, couriers, sourcing and human resource shortfall was observed. Governments laid national and international travel restrictions to curtail the pandemic and disrupted the healthcare infrastructure. The highest impact was seen in low- to middle-income countries, where health infrastructure and logistic support were weak. Clinical trial patients in remote locations suffered as most CROs could not transport medications and laboratory samples on time. Most pharmaceutical organisations also lack the expertise, resources and techniques to organise and function the diverse and advanced logistic requirements.[16, 17]

Regulatory Compliance Concerns

In terms of regulatory compliance, most of the studies registered with the FDA had been affected due to COVID-19. From the compliance and regulatory aspects, most clinical studies were affected due to non-patient compliance relating to supply chain interruption of medications and non-compliance in medication intake, missed clinical visits and incomplete data collection and record-keeping, leading to protocol deviation. [18] The US FDA provided recommendations to industries, investigators and institutional review boards (IRBs) to implement contingency measures and ensure the safety of trial participants. FDA advised sponsors, investigators and institutional review committee members to maintain central study integrity, considering there could be protocol deviation and modification. The FDA recommended improving patient safety, being involved in trials and assessing ongoing problems.[19]

Data Capturing Challenges-

During the Covid scenario, the data collection was mainly through the patient-reported questionnaires and interactions done through technology-driven techniques like the e-consent, video recordings, or telecommunication, digital diary for recording, reviewing adverse events, suspected adverse events, compliance and concomitant medication monitoring. Though these newer technology advancements had their challenges and limitations, the primary concerns were maintaining confidentiality, privacy, and data integrity. In addition, such online data collection methods were challenging to implement at the patient and the CRO level, as training was required at both ends for a smoother process.[20, 21]

Leadership Issues in Trial Management

Healthcare workers are naturally concerned about contracting COVID-19. It is important to boost the workforce's morale early during such times, thereby motivating and creating enthusiastic environments through communications. A strong

leader will help create fulfilling and enriching results in such pandemic situations. Having a strong leader who could motivate and energise the team members was one of the prime concerns seen during the pandemics.[1,21]

Ethics

The ethics committee during the COVID-19 pandemic made a sincere effort to expedite the assessment techniques with proper evaluation and acceptance methods. Unfortunately, the amendments of notifications about the IMP shipment didn't reach the end-users or the ethics committee and the HRA for more than three to four months, which affected the protocol approval process, thus necessitated the requirement of a quick exchange of information regarding the change in regulatory guidelines to improve clinical study operations during and in future pandemics too.[1,**[19, 20]**

Various other concerns and challenges have been reported in conducting and implementing a clinical trial, like patient and employee retention, IMP management, recruitment of patients and staff, participant engagement, funding, collecting study samples and testing, monitoring and audit.[9]To strengthen a clear image of the COVID-19 in medical trials and their distribution[9],the ongoing interventional medical trials are registered at internationally approved trial registries. Approximately 2,024 trials (separable into 2,895 character therapy arms) encompassing complete enrolment in an extra 500,000 patients have been reported.[22]

CONCLUSIONS

Even though the pandemic resulted in increased virulence among the community and high mortality, the scientific trials were conducted successfully.{&&&}

Digital support in trials has played a vital role in ensuring the tests are completed timely and ethically, especially in improving patient recruitment, consent generations and patient retention, thereby ensuring robust clinical studies with optimistic outcomes. Finally, we need to use the lessons learnt during the pandemic to improve patient enrolment, patient adherence, monitoring, and effective and efficient resource management to construct a more ethically robust and built-in platform for clinical trials.[1]

REFERENCES

1. *WHO Director-General's opening remarks at the media briefing on COVID-19 - March 11 2020. WHO. int. (2021). Retrieved March 22th, 2022, from https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020.*
2. *COVID-19 and your CPE. (2022). Https://Checkpointlearning.Thomsonreuters.Com/Newsandupdates/COVID-19-CPE. Retrieved May 11, 2022, from https://checkpointlearning.thomsonreuters.com/newsandupdates/COVID-19-CPE*
3. *Shiely, F., Foley, J., Stone, A., Cobbe, E., Browne, S., & Murphy, E. et al. (2021). Managing clinical trials during COVID-19: experience from a clinical research facility. Trials, 22(1). https://doi.org/10.1186/s13063-020-05004-8*
4. *Q&A on the impact of COVID-19 on research funded or supported by NIHR. Nihon. ac. the UK. (2021). Retrieved March 11 2022, from https://www.nihr.ac.uk/documents/qanda-on-the-impact-of-covid-19-on-research-funded-or-supported-by-nihr/24467.*
5. *DHSC issues guidance on the impact of COVID-19 on NIHR research - Newcastle Joint Research Office (NJRO). Newcastle Joint Research Office (NJRO). (2021). Retrieved April 19 2022, from https://newcastlejro.com/2020/03/dhsc-issues-guidance-on-the-impact-on-covid-19-on-research-funded-or-supported-by-nihr/.*

6. *Gulia, A. (2016). INDIAN JOURNAL OF MEDICAL SCIENCES: A NEW BEGINNING. Indian Journal Of Medical Sciences, 68(1), 1. https://doi.org/10.18203/issn.0019-5359.indianjmedsci20163520*
7. *Ethical standards for research during public health emergencies: Distilling existing guidance to support COVID-19 R&D. World Health Organization. (2021). Retrieved March 9 2022, from https://www.who.int/ethics/publications/ethical-standards-for-research-during-public-health-emergencies/en/*
8. *Maguire, B., & Guérin, P. (2020). A living systematic review protocol for COVID-19 clinical trial registrations. Wellcome Open Research, 5, 60. https://doi.org/10.12688/wellcomeopenres.15821.1*
9. *Hashem, H., Abufaraj, M., Tbakhi, A., & Sultan, I. (2020). Obstacles and Considerations Related to Clinical Trial Research During the COVID-19 Pandemic. Frontiers In Medicine, 7. https://doi.org/10.3389/fmed.2020.598038*
10. *Q&A on the impact of COVID-19 on research funded or supported by NIHR. Nihr.ac.uk. (2021). Retrieved February 20 2022, from https://www.nihr.ac.uk/documents/qanda-on-the-impact-of-covid-19-on-research-funded-or-supported-by-nihr/24467.*
11. *Database.ich.org. (2021). Retrieved March 9 2022, from https://database.ich.org/sites/default/files/E6_R2_Addendum.pdf.*
12. *Farrell, B., Kenyon, S., & Shakur, H. (2010). Managing clinical trials. Trials, 11(1). https://doi.org/10.1186/1745-6215-11-78*
13. *Mitchell, E., Godolphin, P., Meakin, G., & Sprange, K. (2021). Do investigator meetings improve recruitment rates in clinical trials? A retrospective before-and-after study of data from nine multicenter clinical trials. Retrieved March 10 2022.*
14. *Claudia Berrón. (2021). Moving into the Future of Clinical Trials. Applied Clinical Trials-08-01-2021, Volume 30, Issue 7/8. https://www.appliedclinicaltrialsonline.com/view/moving-into-the-future-of-clinical-trials*
15. *Van Dorn, A. (2020). COVID-19 and readjusting clinical trials. The Lancet, 396(10250), 523–524. https://doi.org/10.1016/s0140-6736(20)31787-6*
16. *Asiye Moosivand,a Ali Rajabzadeh Ghatari,b,* and Hamid Reza Rasekha. (2019). Supply Chain Challenges in Pharmaceutical Manufacturing Companies: Using Qualitative System Dynamics Methodology. Iran J Pharm Res. 2019 Spring; 18(2): 1103–1116. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6706717/*
17. *Shepherd, B., & Hamanaka, S. (2015). Overcoming trade logistics challenges: Asia-Pacific experiences. Asia Pacific Journal of Marketing and Logistics, 27(3), 444–466. https://doi.org/10.1108/apjml-09-2014-0133*
18. *Bagiella E, Bhatt D, Gaudino M, et al. The Consequences of the COVID-19 Pandemic on Non-COVID-19 Clinical Trials. J Am Coll Cardiol. 2020 Jul, 76 (3) 342–345. https://doi.org/10.1016/j.jacc.2020.05.041*
19. *FDA, Conduct of Clinical Trials of Medical Products During the COVID-19 Public Health Emergency, March 2020, Updated on August 30, 2021. https://www.fda.gov/media/136238/download Accessed on May 9 2022.*
20. *Bierer, B., White, S., Barnes, J., & Gelinas, L. (2020). Ethical Challenges in Clinical Research During the COVID-19 Pandemic. Journal Of Bioethical Inquiry, 17(4), 717-722. https://doi.org/10.1007/s11673-020-10045-4*
21. *Shiely, F., Foley, J., Stone, A., Cobbe, E., Browne, S., Murphy, E., Kelsey, M., Walsh-Crowley, J., & Eustace, J. A. (2021). Managing clinical trials during COVID-19: experience from a clinical research facility. Trials, 22(1). https://doi.org/10.1186/s13063-020-05004-8*
22. *Bugin, K., & Woodcock, J. (2021). Trends in COVID-19 therapeutic clinical trials. Nature Reviews Drug Discovery, 20(4), 254–255. https://doi.org/10.1038/d41573-021-00037-3*
23. *Bhatt, D. L., & Mehta, C. (2016). Adaptive Designs for Clinical Trials. New England Journal of Medicine, 375(1), 65–74. https://doi.org/10.1056/nejmra1510061*